

Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

SCIENCE

A WEEKLY JOURNAL DEVOTED TO THE ADVANCEMENT OF SCIENCE, PUBLISHING THE OFFICIAL NOTICES AND PROCEEDINGS OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

Friday, May 18, 1906.	
CONTENTS.	
The Carnegie Foundation for the Advancement of Teaching	761
The American Association for the Advancement of Science:—	
Section D-Mechanical Science and Engineering: Professor William T. Magruder.	764
Panama: A Discussion of Present Conditions and the Prospect: Fullerton L. Waldo	769
The Movement in Prussia for the Reorganization of the Instruction in Mathematics and the Natural Sciences in the Secondary Schools: Professor J. W. A. Young	773
Scientific Books:—	
Brøgger on the Position of Raised Beaches in Southeastern Norway: Dr. George Grant MacCurdy. Catalogue of the Fossil Plants of the Glossopteris Flora in the British Museum: Edward W. Berry. Aschan's Chemie der alicyklischen Verbindungen: Dr. J. Bishop Tingle	778
Scientific Journals and Articles	
Societies and Academies:— The American Mathematical Society: Dr. W. H. BUSSEY. Folle-lore Meetings in California: Professor A. L. Kroeber. The Torrey Botanical Club: C. Stuart Gager.	
Discussion and Correspondence:-	
C. S. Rafinesque on Evolution: Dr. Leon- Hard Stejneger. The Influence of the Plasticity of Organisms upon Evolution: Professor Maynard M. Metcalf. A Sim- ple Formula for Mixing any Grade of Alco- hol Desired: Dr. E. W. Berger. Magnet- ism of Diamond Drill Rods: Professor D. W. Johnson.	785
Special Articles:—	
The Terminology of the Parts of the Grass Spikelet: C. V. Piper. Note on the Molec- ular Forces in Gelatine: Professor Arthur	789
Notes on Organic Chemistry:—	
New Analogues of Indigo: Dr. J. BISHOP TINGLE	791

Recent Museum Reports: F. A. L	792
Report on the Bolyai Prize: Professor George	
BRUCE HALSTED	793
The Congress of the United States	794
A New Building for the Geological Survey	794
University of the Pacific and the Earthquake.	795
New York Observatory and Nautical Museum.	795
Bills of Scientific Interest passed by the New	
York Legislature	796
The American Association for the Advance-	
ment of Science	796
Scientific Notes and News	797
University and Educational News	800

MSS. intended for publication and books, etc., intended for review should be sent to the Editor of Science, Garrison-on-Hudson, N. Y.

THE CARNEGIE FOUNDATION FOR THE AD-VANCEMENT OF TEACHING. RULES FOR THE GRANTING OF RETIRING ALLOWANCES.

THE aim of the founder in the incorporation of this foundation is clearly expressed in the act of incorporation passed by the Congress of the United States, and approved by the president.

This aim is there stated to be the foundation of an agency to provide retiring allowances for teachers in the universities, colleges and technical schools of the three English-speaking countries of North America, and to serve the cause of higher education by advancing and dignifying the profession of the teacher in these higher institutions of learning. By the terms of the act of incorporation sectarian institutions are excluded from the benefits of the foundation. Consideration of the question of the admission of state institutions has been deferred until some experience

has been had in the actual administration of the trust.

EDUCATIONAL STANDARD.

The term college is used to designate, in the United States, Canada and Newfoundland, institutions varying so widely in entrance requirements, standards of instruction and facilities for work, that for the purposes of this foundation, it is necessary to use, at least for the present, some arbitrary definition of that term. The following definition, now in use under the revised ordinances of the state of New York, will be employed for the purposes of this foundation:

An institution to be ranked as a college, must have at least six professors giving their entire time to college and university work, a course of four full years in liberal arts and sciences, and should require for admission, not less than the usual four years of academic or high school preparation, or its equivalent, in addition to the pre-academic or grammar school studies.

A technical school, to be eligible, must have entrance and graduation requirements equivalent to those of the college, and must offer courses in pure and applied science of equivalent grade.

To be ranked as a college an institution must have a productive endowment of not less than two hundred thousand dollars.

SECTARIAN LIMITATION.

Institutions of learning will be recognized as eligible to the benefits of this foundation, so far as sectarianism is involved, under the following conditions:

- 1. Universities, colleges and technical schools of requisite academic grade, not owned or controlled by a religious organization, and whose acts of incorporation or charters specifically provide that no denominational or sectarian test shall be applied in the choice of trustees, officers or teachers, nor in the admission of students.
 - 2. In the cases of institutions not owned

or controlled by a religious organization, and in which no specific statement concerning denominational tests is made in the charters or acts of incorporation, the trustees of such institutions shall be asked to certify by a resolution to the trustees of The Carnegie Foundation for the Advancement of Teaching that, notwithstanding the lack of specific prohibition in the charter, 'no denominational test is imposed in the choice of trustees, officers or teachers, or in the admission of students, nor are distinctly denominational tenets or doctrines taught to the students.' Upon the passage of such resolution by the governing bodies of such institutions, they may be recognized as entitled to the benefits of The Carnegie Foundation for the Advancement of Teaching, so far as considerations of sectarian control are concerned.

RECOGNITION OF INSTITUTIONS.

Institutions of higher learning, whether universities, colleges or technical schools, whose educational standard is equal to, or higher than, that indicated in the foregoing, and which comply with the conditions regarding sectarian control, may be recognized by the trustees of The Carnegie Foundation for the Advancement of Teaching, as entitled to share in the benefits of the foundation, and a list of such accepted institutions will be announced. This list will be provisional and to it additions will from time to time be made.

To professors in these institutions the benefits of the foundation shall be extended through the institutions themselves, that is to say, once the rules upon which retiring allowances are granted are definitely determined, they shall work automatically, in what might be called normal cases, that is, in cases of old age or long service. Thus if a professor in such an accepted institution has reached the age of x years, or if he has been in the teaching profession for a

period of y years, he would receive his allowance as soon as his institution applied for it. In cases outside of the normal age or service conditions, the recommendation of the accepted institution shall be considered by the trustees of The Carnegie Foundation for the Advancement of Teaching, and action taken upon the individual case, and once a grant has been made, payment will be made as in normal cases, through the institution.

No institution will be accepted which is so organized that stockholders may participate in its benefits.

RECOGNITION OF INDIVIDUAL PROFESSORS IN INSTITUTIONS NOT ON THE ACCEPTED LIST.

The trustees realize that there are able and devoted teachers rendering admirable service to education in institutions which, owing to low entrance requirements, or for other reasons, are considered below the academic grade requisite to entitle them to a place on the accepted list of institutions. Individual professors of merit or of distinguished service in such institutions may be granted retiring allowances, but in such cases the trustees will deal with the individual professor. Such allowances can not be granted to professors in institutions deemed to be under denominational control.

CONDITIONS FOR THE GRANTING OF NORMAL RETIRING ALLOWANCES.

- 1. Age.—To be eligible to retirement on the ground of age, a teacher must have reached the age of sixty-five and must have been for fifteen years professor in a higher institution of learning. Whether a professor's connection as a teacher with his institution shall cease at an earlier or later age than sixty-five, is a matter solely within the jurisdiction of the professor himself and the authorities of the institution in which he serves.
 - 2. Long Service.—To be eligible for re-

tirement on the ground of length of service, a teacher must have had twenty-five years' service as a professor in a higher institution of learning. It is not necessary that the whole of the service shall have been given in accepted colleges, universities or technical schools.

In no case shall any allowance be paid to a teacher who continues to give the whole or part of his time to the work of teaching, as a member of the instructing staff of a college or technical school.

THE SCALE OF RETIRING ALLOWANCES.

The trustees recognize that a fixed rule limiting the amount of an allowance—such, for instance, as a stated percentage of a professor's salary—can not be adopted without working a serious hardship in many institutions where salaries are low. and under the best conditions must remain low for many years. They have, therefore, adopted a scale under which a teacher who is receiving a low salary is granted a much higher percentage of his salary than is granted to one receiving a higher salary. Thus, for a salary below sixteen hundred dollars a pension of \$1,000 or a sum not to exceed ninety per cent. of the active pay, is granted as a retiring allowance. believed that this scale is a more just one to men on small salaries. It could scarcely dignify the calling of the teacher to allot to a professor who had served many years at twelve hundred dollars a year fifty per cent. of his pay, although that percentage might be a fairly generous allowance in the case of a professor who had been receiving a pay of five thousand dollars.

RULES FOR THE GRANTING OF NORMAL RETIRING ALLOWANCES.

1. A normal retiring allowance is considered to be one awarded to a professor in an accepted university, college or technical school, on the ground of either age or length

- of service. The term professor, as here used, is understood to include presidents, deans, professors, associate professors and assistant professors, in institutions of higher learning.
- 2. Retiring allowances shall be granted under the following rules, upon the application of the institution with which the professor is connected, and in the application it should be clearly set forth whether the retiring allowance is recommended on the ground of age or service.
- 3. In reckoning the amount of the retiring allowance the average salary for the last five years of active service shall be considered the active pay.
- 4. Any person sixty-five years of age, and who has had not less than fifteen years of service as a professor, and who is at the time a professor in an accepted institution, shall be entitled to an annual retiring allowance computed as follows:
- (a) For an active pay of sixteen hundred dollars or less, an allowance of one thousand dollars, provided no retiring allowance shall exceed ninety per cent. of the active pay.
- (b) For an active pay greater than sixteen hundred dollars, the retiring allowance shall equal one thousand dollars, increased by fifty dollars for each one hundred dollars of active pay in excess of sixteen hundred dollars.
- (c) No retiring allowance shall exceed three thousand dollars.
- 5. Any person who has had a service of twenty-five years as a professor, and who is at the time a professor in an accepted institution, shall be entitled to a retiring allowance computed as follows:
- (a) For an active pay of sixteen hundred dollars or less, a retiring allowance of eight hundred dollars, provided that no retiring allowance shall exceed eighty per cent. of the active pay.
 - (b) For an active pay greater than six-

- teen hundred dollars, the retiring allowance shall equal eight hundred dollars, increased by forty dollars for each one hundred dollars of active pay in excess of sixteen hundred dollars.
- (c) For each additional year of service above twenty-five, the retiring allowance shall be increased by one per cent. of the active pay.
- (d) No retiring allowance shall exceed three thousand dollars.
- 6. Any person who has been for ten years the wife of a professor in actual service may receive during her widowhood one half of the allowance to which her husband would have been entitled.
- 7. In the preceding rules, years of leave of absence are to be counted as years of service, but not exceeding one year in seven. Librarians, registrars, recorders and administrative officers of long tenure, whose salaries may be classed with those of professors and assistant professors, are considered eligible to the benefits of a retiring allowance.
- 8. Teachers in the professional departments of universities whose principal work is outside the profession of teaching are not included.
- 9. The benefits of the foundation shall not be available to those whose active service ceased before April 16, 1905, the date of Mr. Carnegie's original letter to the trustees.
- 10. The Carnegie Foundation for the Advancement of Teaching retains the power to alter these rules in such manner as experience may indicate as desirable for the benefit of the whole body of teachers.

THE meeting of the section for organization was held in the engineering building